

MULTISCREEN™ STABLE CELL LINE HUMAN RECOMBINANT GPR158 RECEPTOR

Data sheet

PRODUCT INFORMATION

Catalog Number: C1392

Lot Number: C1392-100725

Quantity: 1 vial (2 x 10⁶) frozen cells

Freeze Medium: Cellbanker 2

Host cell: HEK293T

Transfection: Expression vector containing full-length human GPR158 cDNA (GenBank accession Number NM_020752.3) with FLAG tag sequence at N-terminus

Recommended Storage: Liquid nitrogen upon receiving

Propagation Medium: EMEM, 10% FBS (dialyzed), 1ug/mL puromycin

Stability: In progress

Background: GPR158 is a class C G protein-coupled receptor predominantly expressed in the central nervous system. Recently deorphanized, GPR158 has been identified as a metabotropic glycine receptor (mGlyR), with glycine serving as its endogenous agonist. Activation of GPR158 suppresses intracellular cAMP signaling and regulates neuronal excitability. GPR158 has been implicated in cognition, stress responses, major depressive disorder, and prostate cancer, making it an emerging therapeutic target.

Application: Functional assays

Figure 1

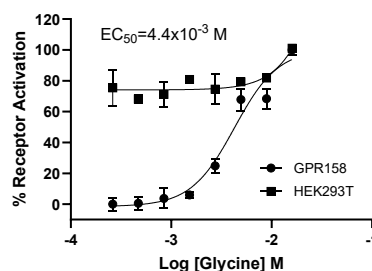


Figure 2

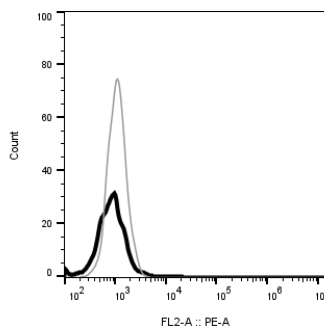


Figure 1. Dose-dependent inhibition of forskolin-stimulated intracellular cAMP level upon treatment with ligand, measured with MULTISCREEN™ TR-FRET cAMP 1.0 No Wash Assay Kit (Multispan MSCM01). **Figure 2.** Receptor expression on cell surface measured by flow cytometry (FACS) using an anti-FLAG antibody. Thin line: parental cells; thick line: receptor-expressing cells.

References:

Fu, et al. (2022) Research Status of the Orphan G Protein Coupled Receptor 158 and Future Perspectives. Cells 8:1334

Jeong, et al. (2021) Structure of the class C orphan GPCR GPR158 in complex with RGS7-Gβ5. Nat Commun 12:6805

Laboute, et al. (2023) Orphan receptor GR158 serves as a metabotropic glycine receptor: mGlyR. Science 379:1352-1358

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